REMARKS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-5, 7-13, 13, 15 and 17 are pending in the present application. Claims 1-5, 7-13, 15 and 17 have been amended to address cosmetic matters of form. No new matter is added.

By way of summary, the Official Action presents the following issues: Claims 1-5, 7-15 and 17 stand rejected under 35 U.S.C. § 103 as being unpatentable over Baum in view of Sakoda et al. (U.S. Patent 6,532,223, hereinafter Sakoda) in further view of Suzuki (U.S. Patent No. 6,652,752, hereinafter Suzuki).

REJECTIONS UNDER 35 U.S.C. § 103

The Official Action has rejected Claims 1-5, 7-13, 15 and 17 under 35 U.S.C. § 103 as being unpatentable over Baum, Sakoda, and Suzuki. The Official Action contends that the cited combination of references discloses or suggests all of the Applicants claimed features. Applicants respectfully traverse the rejection.

Applicants' amended Claim 1 recites, *inter alia*, a channel structuring a method of configuring channels wherein transmission signals are modulated by orthogonal frequency division multiplexing comprising n sub-carriers and multiplexed by time division multiplexing to configure downlink channels, including:

> providing, at the base station, time frames by segmenting a communication channel of said n sub-carriers at every predetermined interval;
>
> selecting, at the base station, from the n sub-carriers, a predetermined number of sub-carriers for insertion of common control channel signals and common pilot signals; and
>
> inserting, at the base station, a common control channel signal and a common pilot signal into the time frames by time division multiplexing with respect to the selected sub-carriers while ensuring that at least one of the

> selected sub-carriers selected from the n sub-carriers used for the frequency division multiplexing has both a common control channel signal and a common pilot signal inserted therein. (emphasis added)

Baum describes, in relation to Figures 4-6, the transmission of synchronization signals in a frame by a plurality of base units. The coordination is based on a pilot code scheme. As shown in Figure 4, based upon the pilot code (i.e., 1-4) a synchronization signal is transmitted during a specific baud interval. Figures 5-6 describe alternative schemes for coordinating the transmission of synchronization signals.[1]

Sakoda describes a wireless telephone system in which base stations within a certain area use a same channel as a frequency channel for a control information channel CCH, and the timing of transmission of control information CCHs at the same channel is set differently between at least adjacent base stations. Control information CCH transmitted by each base station is accompanied with information of the transmission timing of a control information CCH in another base station adjacent to a base station (for example information of which frequency channel in which time slot being used to transmit).[2]

The Official Action has relied upon the combination of Baum and Sakota for providing all of the Applicants claimed features with the exception of "ensuring that at least one of the selected sub-carriers has both a common control channel signal and a common pilot signal inserted therein." In this regard, the Official Action has cited Suzuki.

At the outset, Applicants note that the claims have been amended to clarify that the transmission signals are modulated by orthogonal frequency division multiplexing comprising n sub-carriers. Among those n sub-carriers, a predetermined number of sub-carriers are selected for insertion of common control channel signals and common pilot signals. Thus, at least one of the selected sub-carriers selected from the n sub-carriers used

[1] See Baum at Figs. 4-6; col. 9, line 37 through col. 10, line 58.
[2] See Sakoda at col. 8, lines 11-23.

for frequency division multiplexing has both a common control channel signal and a common pilot signal inserted therein.

Suzuki describes a time division multiplexed communication system in which only a single frequency is used that one time. For example, Figure 3 illustrates signals transmitted from four base stations and their relative timing of transmission and reception. As can be appreciated from Figure 3, a signal frequency is utilized. On the other hand, as shown in Figure 7, Suzuki describes a system utilizing four frequencies (F1-F4) which are sequentially switched in a cycle of multi-frames for transmission. Nevertheless, both figure 3 and figure 7 provide the single use of a single frequency at any given time.[3] As Suzuki only employs a single frequency at a time for signal transmission, there is no need to send a pilot signal and a common control channel signal as both signals in Suzuki must be transmitted through a single frequency channel being utilized. In other words, there is never another frequency channel to transmit either a pilot signal or a common control channel signal.

Conversely, in an exemplary embodiment of the Applicants advancements, at least one of the selected sub-carriers selected from the n sub-carriers used for the division multiplexing has both a common control channel signal and a common pilot signal inserted therein. Suzuki does not disclose or suggest at least the above-noted features, and as Baum and Sakoda are identified as being deficient in this regard, Applicants respectfully submit that a *prima facie* case of obviousness has not been presented.

[3] See Suzuki at col. 5, lines 62-64.

Accordingly, Applicants respectfully request that the rejection of Claims 1-5, 7-13, 15 and 17 under 35 U.S.C. § 103 be withdrawn.

CONCLUSION

Consequently, in view of the foregoing amendment and remarks, it is respectfully submitted that the present application, including Claims 1-5, 7-13, 15 and 17, is patentably distinguished over the prior art, in condition for allowance, and such action is respectfully requested at an early date.

Respectfully submitted,

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